

In re Patent Application of:  
**GUINEA ET AL.**  
Serial No. 09/784,549  
Filing Date: **FEBRUARY 15, 2001**

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REMARKS

The Examiner is thanked for the thorough examination of the present application, and for correctly indicating the allowability of the subject matter of Claim 31. Regarding the informalities raised with respect to Claims 15, 16, 18, 19, 20, 21, 23, 27, 28, and 34, the Examiner notes that each of these claims recites "said plurality of circuits", and she contends that there is no antecedent basis for these recitations. However, Claim 15 depends from Claim 14 which recites in lines 2-3 that "said at least one circuit comprises a plurality of circuits ... ." Accordingly, antecedent basis for the noted recitation in Claim 15 is provided. Moreover, Claim 16 depends from Claim 15, Claim 18 depends from Claim 17 (which, in turn depends from Claim 16), Claim 19 depends from Claim 16, Claim 20 depends from Claim 19, and Claim 21 depends from Claim 20. Thus, antecedent basis is provided for these claims as well.

With respect to Claim 23, this claim depends from independent Claim 22 which recites in line 2 "a plurality of circuits." Claim 27 depends from Claim 26, which in turn depends from Claim 23, and Claim 28 depends from Claim 27. As such, antecedent basis is similarly provided for these claims as well. Claim 34 has been amended to correct the noted informality, as helpfully pointed out by the Examiner, and support therefor may be found on page 6 of the originally filed specification, for example. No new matter is being added, and the change to this claims does not narrow the claim scope thereof for any reason related to the statutory requirements for patentability.

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In view of the foregoing and the supporting arguments presented in detail below, it is submitted that all of the claims are patentable.

### I. The Claimed Invention

The present invention is directed to a switching circuit. As recited in independent Claim 13, for example, the switching circuit includes at least one circuit for receiving a plurality of input clock signals delayed relative to one another and at least one control signal. The at least one circuit outputs a new signal from among the plurality of input clock signals based upon the at least one control signal, where the new signal is advanced or delayed relative to a current signal from among the plurality of input signals currently being output. Moreover, the at least one circuit outputs the new signal synchronously with a transition of the new signal and before disabling the current signal to substantially prevent the production of false signals during switching. Because the switching circuit therefore has reduced susceptibility to false signals or glitches during the change from one phase to an adjacent phase, recovery of the incoming clock data with a high tolerance to jitter is advantageously provided.

Independent Claim 22 is directed to a related switching circuit, and independent Claim 29 is directed to a related circuit for recovering data from a serial data flow. Independent Claim 32 is directed to a related method for switching between a plurality of input clock signals delayed relative to one another. Each of

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these claims recites similarly to Claim 13 that the new output signal is output synchronously with a transition of the new output signal before disabling the current signal to substantially prevent the production of false signals during switching.

## II. The Claims Are Patentable

The Examiner rejected independent Claims 13, 22, 29, and 32 based upon Nguyen (U.S. Patent No. 6,255,880) in view of O'Brien (U.S. Patent No. 4,419,629). Claim 29 was further rejected in view of Henderson et al. (U.S. Patent No. 5,022,056). Nguyen is directed to a one-shot DLL circuit which includes a clock multiplexer that selects one of a plurality of clock signals based upon a select signal. The Examiner correctly acknowledges that Nguyen fails to teach or fairly suggest outputting a new clock signal synchronously with a transition of the new signal before disabling a current clock signal to substantially prevent the production of false signals during switching, as recited in the above-noted independent claims.

Nonetheless, the Examiner contends that O'Brien provides this noted deficiency. O'Brien is directed to a switching circuit that employs the output of a newly selected oscillator to disable a formerly selected oscillator, and to subsequently enable the output of the newly selected oscillator to be coupled to the oscillator output of the switching circuit. This is done to prevent switch-over from one oscillator to the other during a metastable period. As support for the Examiner's

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contention, she points to FIG. 1 and col. 1, lines 21-28 and col. 2, lines 11-14 and 56-63 of O'Brien.

It is respectfully submitted that the Examiner has mischaracterized O'Brien, and that the selective combination of references proposed by the Examiner therefore fails to teach or fairly suggest all of the recitations of the above-noted claims. As stated in the abstract of O'Brien, for example, "[t]he switching circuit employs the output of the newly selected oscillator to disable the formerly selected oscillator and to subsequently enable the output of the newly selected oscillator to be coupled to the oscillator output of the switching circuit ..." (Emphasis added). That is, according to O'Brien the following steps are performed (in the order indicated):

- 1) the new oscillator is selected to allow it to produce a new signal;
- 2) the new oscillator disables, by way of the new signal, the old oscillator (i.e., the one formerly selected), and the current signal is disabled; and
- 3) the new oscillator is coupled to the main output of the switching circuit (terminal 14 of FIG. 1) providing the new signal. See, e.g., col. 3, lines 4 - 61.

In other words, O'Brien teaches that the switching circuit outputs the new signal (the above-noted step 3) after disabling the current signal (step 2). In stark contrast, the above-noted independent claims recite that the at least one

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circuit outputs the new signal before disabling the current signal.

Accordingly, taking all of the teachings of the prior art as a whole, the selective combination of references proposed by the Examiner fails to teach or fairly suggest all of the recitations of the above-noted independent claims. To find otherwise would require the impermissible use of the Applicants' teachings in hindsight as a roadmap or template to piece together the prior art.

Thus, it is submitted that independent Claims 13, 22, 29, and 32 are patentable over the prior art. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

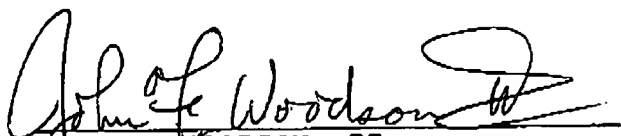
#### CONCLUSIONS

In view of the foregoing, it is submitted that all of the claims are patentable. Accordingly, a Notice of Allowance is respectfully requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

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Respectfully submitted,



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